

# **SOUTH DAKOTA CROSSWALK PROJECT MANUAL**

**Facilitators:**

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**Based on resources developed by Dr. Mikala Rahn, Public Works, Inc., Pasadena, California**

# **The Four Pillars of the State Model for the Crosswalk Project**

- 1. Standards: Technical (Office of Career and Technical Education - approved); Academic (State-approved); Transferable Work Skills (SCANS)**
- 2. Completed Crosswalk Matrices for reading, communication arts, mathematics, science, and transferable work skills**
- 3. Core Course Standards: Agreed upon course standards consistent across the state, validated by technical committees**
- 4. Standards-based Course Syllabi: Components include**
  - Course description**
  - Instructional philosophy and deliver plan**
  - Major integrated course goals**
  - Major course projects**
  - Course assessment plan**

# ***STANDARDS-BASED EDUCATION***

## **Why Standards-based Education?**

1. Standards set clear, high expectations for student achievement.
2. Standards provide a basis for teacher and student accountability.
3. Standards promote educational equity because they are intended for ALL students.
4. Standards help guide efforts to measure student achievement, improve teacher training, develop more effective curricula and instructional strategies, and allocate resources more efficiently.

## **What are content standards?**

Academic and technical standards define WHAT students should know and be able to do. They define knowledge and skills students should possess. Standards are sometimes referred to as curriculum frameworks, learning standards, learning expectations, outcomes, and a variety of other names. Standards outline the content and skills students should cover, either at grade level, by completion of a program of study, or by graduation.

## **What are performance standards?**

They answer the question, “How good is good enough?” Performance standards are based on content standards and define HOW or HOW WELL students must perform. To be effective, they should

- Describe student work that meets the standard and
- Provide samples of student work that illustrate what it means to “meet” the standards.

Performance standards give teachers, students, administrators, and parents a clearer picture of what it looks like when students are meeting a standard, or when they are not.

## **How do standards help improve student achievement?**

Standards provide students with a set of high expectations. They can also be a useful tool for students to see what they need to do to progress through school. Standards also provide a high bar for teachers to help their students reach. In general, if expectations are low, students’ performances will be low. Expect more, and teachers almost always find that students achieve more. Standards also provide a way to ensure that each student in each school gets the same high quality education.

Information from the Council for Basic Education, [www.c-b-e.org](http://www.c-b-e.org)

# South Dakota Crosswalk Project

## Purpose of the Materials:

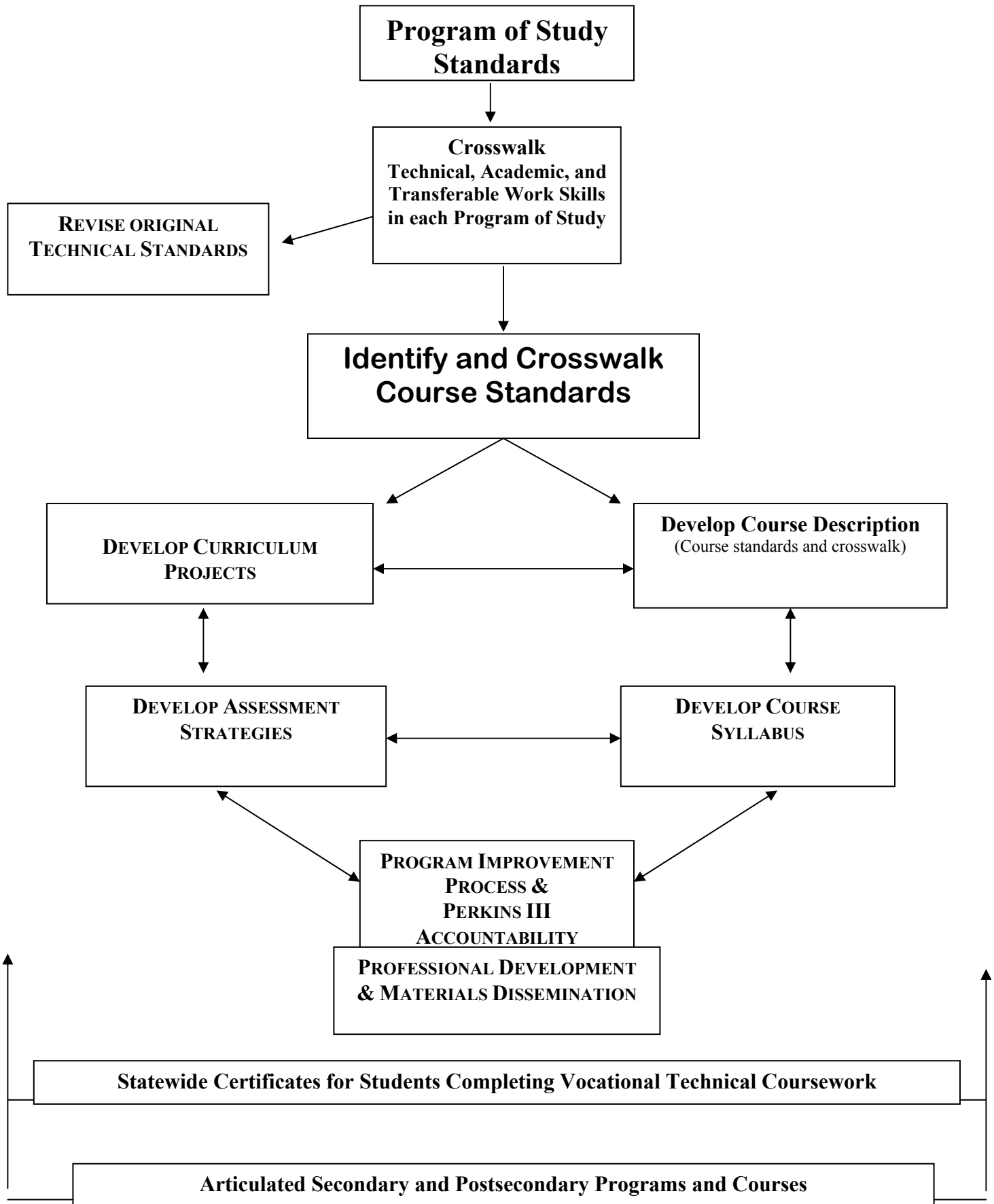
The South Dakota Crosswalk Project is a process which emphasizes the importance of career technical, academic, and employability standards and how they interrelate in the educational setting. It helps educators identify how career technical courses help students attain career technical skills, enhance students' academic learning, and help them develop transferable work skills. Standards-driven curriculum and assessment clearly define for administrators, teachers, parents and students what is expected of learners throughout programs of study and courses.

The purpose of these materials is to assist in structuring workshops and technical assistance aimed at improving the quality of career technical courses. The materials can also assist academic teachers increase the relevance and application of their content.

## Participants will learn how to . . . .

1. Develop program standards;
2. Crosswalk program standards to academic content standards;
3. Develop course descriptions which include course standards and crosswalk to academic standards;
4. Develop a course syllabus which includes:
  - Developing a course description;
  - Developing an instructional philosophy and delivery plan;
  - Writing course goals based on academic, technical, and transferable work skill standards;
  - Determining main course project(s) for achieving course goals; and
  - Writing an assessment plan for the course.
5. Develop projects, performance tasks and written scenarios; and
6. Develop a rubric to measure performance.

# South Dakota's Plan for Designing Programs and Courses for Quality Learning



## **CROSSWALK RATIONALE**

- ✓ To demonstrate how technical courses enhance students' academic and transferable work skills
- ✓ To identify areas within the curriculum where technical, academic, and transferable work skills need to be enhanced and integrated
- ✓ To develop and upgrade/expand technical curriculum
- ✓ To help programs identify where they meet and enhance the state content standards in reading, communication arts, mathematics, and science
- ✓ To develop standards-based course syllabi which contain course description, instructional philosophy and delivery plan, integrated course goals, course projects, and assessment plans
- ✓ To develop a variety of strategies for assessing students and curriculum
- ✓ To develop strategies to diversify teaching methodologies to reach all students
- ✓ To demonstrate the interrelationship among the Program Improvement Process, Perkins III Accountability Measures, and course/program articulation from secondary to postsecondary education

## Developing Program Standards

**Standards** clearly define what is to be taught and what kind of performance is expected. Standards should represent a consensus among stakeholders on what is important for students to know and be able to do.

Standards can be written differently in certain industries. Regardless, there is a need for both content and performance standards. Both are essential for developing an integrated curriculum and assessment system.

**Content Standards** tell what it is we expect students to know and be able to do. They are not only a list of important knowledge and skills; they convey a vision for learning.

**Performance Standards** indicate how well we expect students to perform. That is, performance standards define and illustrate levels of expected accomplishment with respect to content standards. Different performance levels may be applied to a single content standard (e.g. basic, proficient, advanced) or single minimum proficiency level (e.g. 80%).

Standards for performance can be developed in the following categories:

- Academic Content Standard
- Technical Competencies/Standards
- Transferable Work Skills (SCANS)

Academic content standards have been developed at the state level in Mathematics, Reading, Communications Arts, Social Studies, and Science. Standards are available to use in the classroom. For Transferable Work Skills, we are using SCANS competencies developed through the federal Department of Labor. This section is focused on developing program technical competencies/standards.

### Getting Started . . . .

1. **Determine the program of study within each career technical program area.** The state department in conjunction with local level input is beginning to cluster career technical course offerings into programs of study. The next page lists the proposed career technical programs of study.
2. **Determine how broad to group standards.** It is necessary to come to terms with the age-old debate of broad versus specific skills. In some areas, standards might be broad such as in the program of study *Parenting* within Family and Consumer Sciences. In other cases, standards may be specific such as in construction or automotive. The goal is not to be too broad so the standards do not inform the teacher, parent, or student specifically about the expectations -- or too narrow (such as a long task list) that the list communicates so many discrete tasks that there is no integrated or applied picture.
3. **Draft and validate standards.** Standards take time to develop. Standards require the input of multiple stakeholders, especially employers and teachers. Methods for developing standards may include literature review, focus groups, surveys, modified DACUM (Develop a Curriculum), worker observation and other methods.
4. **Disseminate and fine-tune standards.** The process never ends to keep standards state of the art!

## **Career Technical Programs of Study**

### **FAMILY AND CONSUMER SCIENCES**

1. Career, Family, and Community Connections
2. Human Development
3. Family
4. Interpersonal Relationships
5. Parenting
6. Nutrition and Wellness
7. Consumer and Family Resources

### **Technology Education**

1. Technology Education

### **Business**

1. Office Technology Education
2. Accounting
3. Entrepreneurship
4. Finance and Management
5. Computer Applications/Keyboarding
6. Marketing

### **Trades and Industrial Education**

1. Auto Body
2. Auto Mechanics
3. Carpentry
4. Drafting
5. Electronics
6. Graphic Arts
7. Welding
8. Machine Tool
9. Radio/TV Production
10. Cook/Chef
11. Information Technology (Computer hardware)

### **Health**

1. Patient Care
2. Diagnostic
2. Administrative Support

### **Agriculture Education**

1. Agricultural Processing Technology
2. International Agricultural Marketing
3. Leadership and Personal Development
4. Agribusiness
5. Horticulture
6. Natural Resources
7. Agricultural Engineering and Technology
8. Supervised Agricultural Experience
9. Applied Animal Science
10. Applied Plant Science
11. Entrepreneurship in Agribusiness

# Worksheet: Developing Program Standards

Students will be able to. . . . .	Course Standard is Taught

## KNOWLEDGE TAXONOMY (BLOOM'S)

<b>Competence</b>	<b>Skills Demonstrated</b>
Evaluation	<ul style="list-style-type: none"> <li>• Compare and discriminate between ideas</li> <li>• Assess value of theories, presentations</li> <li>• Make choices based on reasoned argument</li> <li>• Verify value of evidence</li> <li>• Recognize subjectivity</li> </ul> <p><u>Question Cues:</u> Assess, decide, rank, grade, test, measure, recommend, convince, select, judge, explain, discriminate, support, conclude, compare, summarize</p>
Synthesis	<ul style="list-style-type: none"> <li>• Use old ideas to create new ones</li> <li>• Generalize from given facts</li> <li>• Relate knowledge from several areas</li> <li>• Predict, draw conclusions</li> </ul> <p><u>Question Cues:</u> Combine, integrate, modify, rearrange, substitute, plan, create, design, invent, what if, compose, formulate, prepare, generalize, rewrite</p>
Analysis	<ul style="list-style-type: none"> <li>• Seeing patterns</li> <li>• Organizing parts</li> <li>• Recognizing hidden meanings</li> <li>• Identifying components</li> </ul> <p><u>Question Cues:</u> Analyze, separate, order, explain, connect, classify, arrange, divide, compare, select, infer</p>
Application	<ul style="list-style-type: none"> <li>• Use information</li> <li>• Use methods, concepts, theories in new situations</li> <li>• Solve problems using required skills or knowledge</li> </ul> <p><u>Question Cues:</u> Apply, demonstrate, calculate, complete, illustrate, show, solve, examine, modify, relate, change, classify, experiment, discover</p>
Comprehension	<ul style="list-style-type: none"> <li>• Understand information</li> <li>• Grasp meaning</li> <li>• Translate knowledge into new context</li> <li>• Interpret facts, compare, contrast</li> <li>• Order, group, infer causes</li> <li>• Predict consequences</li> </ul> <p><u>Question Cues:</u> Summarize, describe, interpret, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend</p>
Knowledge	<ul style="list-style-type: none"> <li>• Observation and recall of information</li> <li>• Knowledge of dates, events, places</li> <li>• Knowledge of major ideas</li> <li>• Mastery of subject matter</li> </ul> <p><u>Question Cues:</u> List, define, tell, describe, identify, show, label, collect, examine, tabulate, quote, name, who, when, where, etc.</p>

# SCANS

## (The Secretary's Commission on Achieving Necessary Skills)

### WORKPLACE KNOW-HOW

**COMPETENCIES** - Effective workers can productively use:

- ⇒ RESOURCES - allocating time, money, materials, space, & staff;
- ⇒ INTERPERSONAL SKILLS - working on teams, teaching others, serving customers, leading, negotiating, and working well with people from culturally diverse backgrounds;
- ⇒ INFORMATION - acquiring and evaluating data, organizing and maintaining files, interpreting and communicating, and using computers to process information;
- ⇒ SYSTEMS - understanding social, organization, and technological systems, monitoring and correcting performance, and designing or improving systems;
- ⇒ TECHNOLOGY - selecting equipment and tools, applying technology to specific tasks, and maintaining and troubleshooting technologies.

**THE FOUNDATION** - Competence requires:

- ⇒ BASIC SKILLS - reading, writing, arithmetic and mathematics, speaking, and listening;
- ⇒ THINKING SKILLS - thinking creatively, making decisions, solving problems, seeing things in the mind's eye, knowing how to learn, and reasoning;
- ⇒ PERSONAL QUALITIES - individual responsibility, self-esteem, sociability, self-management, and integrity.

The SCANS Report, 1991

# Core Course Standards for \_\_\_\_\_ (Course Title)

PROGRAM OF STUDY:

COURSE NAME:

Course Description:

Pre-requisite Courses:

Technical Standards	Links to Academic Content Standards
<i>Students will . . . .</i>	

Transferable Work Skills

## Course Syllabus Evaluation Guide

Following is a description of the contents and expectations for each section of a syllabus. Please use these descriptions as a guideline for evaluating the syllabi in this manual as well as the syllabi you develop. Look at each section and decide if it **Meets, Partially Meets, or Does Not Meet** the description for that section. Then decide what changes need to be made for the section to meet the criteria in the guidelines.

### 1. Course Description

- Aim:  
Statement of what students will learn in the course.
- Topics covered:
- Place within the program of study:  
State if this is a required course for specific major(s). Indicate the prerequisites for the course and if the course is a prerequisite for other courses.
- Length:  
Is this a full-year or semester-length course? How much time per day?
- Prerequisites:  
List any courses that students must take before taking this course.

### 2. Instructional Philosophy and Instructional Delivery Plan

- Expectations for student performance
- How instruction will be delivered
- How students will work (independently and/or in teams)
- How the community will be used
- How students will be evaluated

### 3. Integrated Course Goals

The range of goals should reflect basic knowledge, higher levels of intellectual development, and procedural skills that students will acquire in the course. Course goals should be **integrated** expectations based on the **Crosswalk** of course standards/competencies, academic content standards, and transferable work skills. A good place to begin to determine course goals is where the Crosswalk Matrices indicate strong correlation among technical, academic, and employability standards. **Academic, technical, and transferable work skill standards should be imbedded into each course goal.**

- **The goals should integrate the essential competencies: technical, academic, transferable work skills standards. Goals are broad statements that integrate all essential competencies students are expected to achieve in the course.**
- There should be from 6-10 goals/objectives to achieve by the end of the course that address critical knowledge and skills and provide an image of what is expected of the student.
- Areas of strong crosswalk connections are identified and used to develop goals.
- The **Core Course Standards** must be evident within the course goals.

#### 4. Major Course Projects

List in order the major projects that students will complete during course.

A project is defined as a curriculum unit or cumulative assessment to be completed by the students over time. Projects could include a research paper, demonstration with written component, video, Power Point and other technology-based presentations, etc. Projects tend to have both a product and written component. Projects typically include all skill and knowledge areas: technical, academic, and transferable skills. Projects should allow students to plan, collect, and evaluate information; analyze situations; and develop procedures for solving problems typically encountered in the workplace. They also provide a context for teaching technical and safety skills associated with a career major. Projects allow students to develop problem-solving skills. A good project generally requires a series of steps and the ability to make judgments and decisions when unexpected events occur. **Projects should be based on at least one integrated course goal and clearly identify and focus on technical, academic, and transferable work skills the students will attain.**

#### 5. Course Assessment Plan

Assessments should evaluate all three standards: technical, academic, and transferable work skills. Assessments should also evaluate processes, procedures, and application of knowledge. Use a variety of assessment strategies and instruments, including paper and pencil tests, demonstrations, oral presentations, products, models, portfolios, etc. The assessment description includes the method of evaluation, type of tests and assessment strategies, etc.

Assessment Strategy	Description	Weight/Percent
1.		
2.		
3.		
4.		

# Sample Course Syllabus

## An Overview of Technology

**Course Description:** This course will introduce students to the various systems in the field of technology. The topics covered in the course are Problem Solving, Teamwork, Manufacturing, Construction, Energy/Power, and Transportation. This course is the first course in any program in the field of Technology; it is aimed at students in grades 7 to 9 and is one semester in duration. The students should have completed all math, science and reading courses through their current grade level.

**Instructional Philosophy and Instructional Delivery Plan:** Students will be expected to meet all course goals listed below and demonstrate competency with a minimum of 85% accuracy. The coursework will be mainly laboratory and application-based focusing on student research, experimentation, and computer simulation with minimal lecture use only to introduce concepts and procedures. Students will work cooperatively to complete several projects solving, and construction skills. Assignments will require students to draw on academic skills in mathematics, science, reading, and communications arts.

Student assessment will be based on group work, individual completion of projects, journals, portfolios, project presentation, written reports and tests of students' knowledge of important concepts and demonstration of important skills. In carrying out projects, students will explain how they thought through the assignment and considered various alternatives to complete the project and accomplish the objectives.

### Course Goals:

The students will:

- Develop an awareness of basic technological systems and identify the components of the systems in the areas of manufacturing, construction, energy/power/transportation, and communications.
- Employ the applicable codes, laws, standards or regulations to safely use a variety of tools, equipment, machines, material, and technical processes to complete projects.
- Identify the factors that influence the development of technological systems.
- Use problem solving and critical thinking to make decisions.
- Integrate academic skills with technological activities.
- Formulate basic marketing processes and techniques in the industries.
- Demonstrate teamwork, leadership, integrity, honesty, work habits, and organizational skills.

### Major Course Projects:

- Research and analyze a career of their choice in one of the technology areas of construction, manufacturing, energy/power/transportation, and communications; then prepare a 2'x3' poster, accompanied by a 3 page paper that presents their discoveries.
- As a team selects and researches a key event that influences the development of a technological system, prepare and present to the class a skit dramatizing the event.

- Working within teams, students will construct and launch solid fuel rocket. These students will determine trajectory angle and height of projectile using mathematical principles. A one-page report will accompany these computations.
- Marketing plan will include selected target area of local community and school complex. Students use problem solving and brainstorming to select a design for a product. They participate in the organization and operation of a real or simulated manufacturing project. Students develop marketing plan which includes market feasibility study, cost of manufacturing, material cost, advertising cost and sales projections. Financing will be arranged for this project through local lending institutions. The students will form a mini-corporation.

## Course Assessment Plan

### Performance Standards

Grade	Performance Standard
<b>A</b>	<b>Independent Learner</b> <i>Did research, designed and planned; applied academic skills; evaluated work and made adjustment; did quality work; needed help from the teacher; sought and found resources independently; demonstrated knowledge with a grade of 90 or higher; produced a quality portfolio</i>
<b>B</b>	<b>Semi-Independent Learner</b> <i>Did research, designed and planned; needed some help from the teacher; did quality work with few flaws; needed feedback from the teacher to realize work did not meet standards; redid work to meet standards; demonstrated knowledge with a grade of 80 or higher; produced a better-than average portfolio.</i>
<b>C</b>	<b>Dependent Learner</b> <i>Needed help to research, design and plan or had to be given a plan; relied a great deal on the teacher; had to be given procedures for performing tasks; required significant help to produce a quality product; needed help to evaluate a product, final product still did not meet standards; demonstrated knowledge with a grade of 70 or higher; produced an average portfolio.</i>
<b>F</b>	<b>Failure</b> <i>Did not complete projects; if projects were completed, they were of such low quality that they did not pass; failed to document procedures; did not show criteria for determining quality; scored less than 70 on knowledge tests; produced a poor portfolio or none at all.</i>

Students will be evaluated as follows:

Evaluation Criteria	Method of Evaluation	Percent
Daily participation	Attendance, class behavior, participation lab work	15
Projects	Portfolios, written and oral presentations quality of finished projects	20
Performance	Adequacy of competency performance and safety	15
Tests	Unit tests, practical quizzes	25
Final examination	comprehensive, objective and practical	25

## **An Overview of Technology-Project Outline**

**Project Title:** Solid Fuel Rockets

**Project Description:** Student teams will investigate rocket components and use available materials and tools to fabricate a solid fuel rocket. Teams will then demonstrate safe use of equipment when launching the rocket and use instruments to take measurements on which to base future calculations. Student teams will assemble a provided solid fuel rocket kit and use an approved launch device to propel the rocket. Students will take measurements of the rockets flight, which will be used for further calculations summarizing their findings in a one-page research document.

### **Course Goals Supported/Outcomes:**

- Employ the applicable codes, laws, standards or regulations to safely use a variety of tools, equipment, machines, materials, and technical processes complete projects.
- Use problem solving and critical thinking to make decisions.
- Integrate academic skills wit technological activities.
- Demonstrate teamwork, leadership, integrity, honesty, work habits, and organizational skills.

### **Performance Specifications:**

When launched the rocket must operate satisfactorily throughout the duration of the flight and produce the desired effects:

- rocket must not breakup during launch, flight or recovery
- measure height, time of flight then use these values to calculate trajectory and distance flown
- logically present their findings in a one-page research document using correct grammar and sentence structure
- exhibit cooperation and leadership with in the team

### **Rules and Guidelines:**

- The rocket will be assembled according to the instructions included in the kit.
- Safety glasses will be worn at all times in the lab.
- Students must remain outside a 15 feet safety zone that surrounds the launch pad when the launch controls are active.
- Safe behavior must be employed in the launch area.

### **Instructional Delivery Plan:**

*Introduction to project:* The class is introduced to the exciting world of rocketry through a short video of NASA launches, space walks, and moon walks. The teacher will briefly discuss rocket components and how rockets operate. Lab safety rules will also be reviewed.

*Class operation:* Student teams are selected. The school provides all supplies and materials to build and launch the rocket. Teams will construct the rocket kits according to manufacture's directions. During the launch of the rocket, teams must designate launch personnel and recovery personnel from with in the team. The team will use the data from the launch of their rocket to complete calculations for trajectory and flight distance. The individual students will then use the data and calculations from their team to write his/her own one-page research document to be presented orally to the class

*Monitoring, evaluating and grading performance:* Each team is required to assemble one rocket kit and successfully launch it taking measurements of the height obtained by the rocket and its time of flight. The

team will then complete calculations. The individual student will write a one-page research document and present it to the class. Group discussions and study sheets will be used to periodically assess students understanding.

**Assessment Rubric:**

	1	2	3	4	5	
Construction	Rocket completely disassembled during flight		Several pieces become detached during flight/ met minimal requirements		Rocket remains intact throughout flight/ outstanding design and appearance	X5
Launch	No measurements taken or calculations made		Errors made in taking measurements and/or calculations		Accurate measurements and calculations	X5
Report	Does not clearly explain findings		Explains finding with some logic errors		Clearly explains findings	X5
Teamwork	Does not contribute to the group effort		Must be occasionally prompted to contribute to the group effort		Demonstrates leadership and makes beneficial contribution to the group effort	X5

## Medical Terminology

**Course Description:** This course is designed to provide individuals entering the health care profession with basic medical terminology and the skills to easily and quickly learn them. This is a required course within Health Careers at both the secondary and post secondary levels. At the secondary level it takes 60 hours of instructional time and at the postsecondary level is equal to 1.5 collegiate units.

**Instructional Philosophy and Instructional Delivery Plan:** The expectations for student performance are basic knowledge of medical terms and skill to interpret additional terms. Instructional methodologies include visual, written, and auditory. A combination of delivery techniques such as computerized practice sets, illogical word associations, collaborative work groups, and application of knowledge to the health care setting will be used. Community health care facilities will help support the use of medical terminology while the student is involved in hi/her internship. Successful completion of all assignments and a minimum of 80% on all written examinations will be used to evaluate students.

### Course Goals:

Students will be able to do the following:

- identify the organs and structures of the body systems
- explain the main functions of the body systems
- define the word roots and combining forms used to describe the organs and structures
- define suffixes and prefixes in medical words
- build and analyze thousands of medical words
- understand the meaning of new medical words by defining the elements
- master application, pronunciation, and spelling of medical terms by using the pronunciation guides and audiocassette tapes

### Major Course Projects:

- Authentic application of medical terminology during internships at health care facilities
- Work collaboratively to interpret medical reports
- Role-play using assigned medical terms

## Course Assessment Plan

Assessment Strategy	Description	Weight
Software assessment exercises with printed results		10%
Chapter quizzes	Multiple choice and short answer	50%
Observation	Checklist by internship supervisor	5%
Written interpretation	Of medical report	5%
Role playing	Appropriate use of medical terms	5%
Comprehensive final exam		25%

**Project Title:** Medical terms role-play

**Course Goals:** Master pronunciation, application, and spelling of medical terms using correct grammar

**Situation:** Medical terms will be assigned to small groups to develop a role-play

### **Performance Specifications**

#### **Technical**

- Application of the medical term
- Teamwork

#### **Academic**

- Spelling
- Grammar
- Listening

#### **Transferable Skills**

- Creative thinking
- Reasoning
- Displaying self/time-management

### **Project Rules and Guidelines**

After completion of a unit of medical terminology students will be assigned a role-play. Students will be evenly divided into groups. Each group will be provided with a list of 25 medical terms and a medical dictionary. From this list of terms, each group will select ten or more terms to develop a role-play.

#### **Key Project Points:**

- A written script will be developed by the team that uses ten or more medical terms
- The teams will be given 20 minutes to write their scripts
- All students will assume a character and participate in the oral presentation
- Presentation length will be a maximum of five minutes
- The written script and the oral presentation shall contain correct grammar
- Each student will individually write a 30 or more word critique (reflection) of each role-play presentation
- The scripts and critiques must be handed in at the end of the class period

### Medical Terminology Role Play Assessment Script Assessment

5	4	3	2	1
Applies all medical terms correctly		Uses 80% correctly		Uses 60% correctly
Spells all terms correctly		Spells 80% correctly		Spells 60% correctly
Pronounced all medical terms correctly		Pronounced 60% correctly		Pronounced 60% correctly

### Oral Presentation Assessment

Team work is demonstrating by (a) all students participating, (b) all project components are completed, and (c) project is done on time		Component "a", "b" or "c" is not demonstrated.		Two or more components are missing
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### Critique Assessment

Reasoning is demonstrated by recognizing all correct use of terms		80% recognized		60% recognized
Listening skills are demonstrated by correctly identifying all items on the critique worksheet		80% identified		60% identified

# Course Syllabus

Note: If you follow these guidelines, you will produce a complete course syllabus. This syllabus can be given to school administrators, teachers, employers, parents and students to show them what you expect students to learn in the course. It can help you gain support from other educators, the business community and parents. Above all, it provides clear information to students on what is expected of them.

Page numbers after each step refer to additional information in the guide – *Designing Challenging Career technical Courses*.

## 1. Course Description (pages 35-36)

- Aim:  
Statement of what students will learn in the course.
- Topics covered:
- Place within the program of study:  
State if this is a required course for specific major(s). Indicate the prerequisites for the course and if the course is a prerequisite for other courses.
- Length:  
Is this a full-year or semester-length course? How much time per day?”
- Prerequisites:  
List any courses that students must take before taking this course.

## 2. Instructional Philosophy and Instructional Delivery Plan (pages 36-38, 61-66)

- Expectations for student performance
- How instruction will be delivered
- How students will work (independently and/or in teams)
- How the community will be used
- How students will be evaluated

### 3. Integrated Course Goals (pages 38-44).

The range of goals should reflect basic knowledge, higher levels of intellectual development, and procedural skills that students will acquire in the course. Course goals should be **integrated** expectations based on the **Crosswalk** of course standards/competencies, academic content standards, and transferable work skills. A good place to begin to determine course goals is where the Crosswalk Matrices indicate strong correlation between academic, technical, and employability standards. **Academic, technical, and transferable work skill standards should be imbedded into each course goal. The Core Course Standards should also be evident within the course goals.**

- **The goals should integrate the essential competencies: technical, academic, transferable work skills standards. Goals are broad statements that integrate all essential competencies students are expected to achieve in the course. Goals should contain the Core Course Standards.**
- There should be from 6-10 goals/objectives to achieve by the end of the course that address critical knowledge and skills and provide an image of what is expected of the student.
- Areas of strong crosswalk connections are identified and used to develop goals.

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

# Questions for Judging Major Course Goals

A good set of course goals will address each of the following questions. Some goals may address more than one question.

1. What specific bits of technical and academic information is the student expected to recall, recognize or have knowledge of as a result of this course (symbols, terminology, facts, trends and directions, classifications or categories, criteria for making judgements, common procedures employed and organizing principles)?
2. What translations, interpretations, estimations or predictions are students expected to make when confronted with written and oral communications or physical demonstrations representative of the technical content covered by the course?
3. For what problem(s) or projects will the student be expected to find a solution? What problems or projects will the student complete by becoming familiar with the problem or project? Can students remember and apply the appropriate technical and academic procedures and principles and the appropriate methods to the solution of the problem or completion of the project?
4. What analyses are students expected to make by breaking down – data, a productions process, a particular technology or material, a product or service, interaction of members of a study or work site team and written or oral assignments – into smaller parts, and determining the relationship of the parts for the purpose of conveying meaning, drawing conclusions or designing or redesigning a project?
5. How are students expected to synthesize what they have learned into a new and meaningful framework or project by production of a unique communication (paper, video, speech, etc.); produce and carry out a plan or proposed set of operations, or by studying the facts of a given situation and classifying or organizing them into a logical consistent scheme?
4. What judgments – accuracy, economy, effectiveness, satisfaction, etc. – are students expected to make about the value of a given technology, product, material, procedure, idea, etc. to complete either a school and/or work site assignment?
7. Is there a clear connection between the course goals and the crosswalked standards?

# Developing Course Goals

## Method #1

Collapse or cluster **Skill Standards** or **Competencies** or **Course Objectives** into a broader list of **Course Goals**. Use the crosswalk to guide the development of course goals.

**Course: Agriculture—Animal Science**

### **Skill Standards:**

Students will. . . .

- Understand the factors influencing animal nutrition and feeding. They will identify common feeding ingredients and explain the uses of different feeds for a particular species.
- Understand principles of animal nutrition and feeding including the four different types of digestive systems.
- Identify the common feed ingredients and explain the uses of different feeds for particular animal species.
- Identify general symptoms of animal health problems.
- Exhibit curiosity, open-mindedness and the ability to think critically in daily life.
- Investigate problems and make choices about experimental design including ideas, concepts and processes using controlled experiments, previous research data, field studies and conclusions.
- Communicate clearly about the natural world using a variety of methods.

### **Course Goal:**

Students will conduct a feed trial comparing the effects of feeds on weight gain and feed efficiency in livestock including developing a hypothesis, conducting the test, and communicating the results.

# Developing Course Goals

## Method #2

Develop **Course Goals** from recommended set of **Guiding Questions**.

### **Course: Marketing**

- (1) What specific bits of technical and academic information is the student expected to recall, recognize or have knowledge of as a result of this course?

**Course Goal #1:** Students will understand the role and characteristics of marketing in three different types of economic systems: capitalism, socialism and communism.

- (2) What translations, interpretations, estimations or predictions are students expected to make when confronted with written and oral communications or physical demonstrations representative of the technical content covered by the course?

**Course Goal #2:** Students will be able to use results from surveys, financial forecasting data and other sources to describe markets behavior.

- (3) What problem(s) or projects will the student be expected to solve or complete by becoming familiar with the problems or project?

**Course Goal #3:** Students will be able to develop a marketing plan for a new or existing business or product line.

- (4) What analyses are the students expected to make by breaking down into smaller parts and determining the relationship of the parts to convey meaning, to draw conclusions or to design or redesign a project?

**Course Goal #4:** Students will create and administer a marketing survey, analyze the results and provide feedback for a business that has targeted local students or community as potential buyers for their product.

- (5) How are students expected to synthesize what they have learned into a new and meaningful framework or product by production of a unique communication, produce and carry out a plan or proposed set of operations or study the facts of a given situation and classify or organize them into a logical, consistent scheme?

**Course Goal #5:** Students will develop a public relations campaign for a local business based on the business' involvement and service within the community.

- (6) What judgments—accuracy, economy, effectiveness, satisfaction, etc. -- are students expected to make about the value of a given technology, product, material, procedure, idea, etc. to complete either a school or work site assignment?

**Course Goal #6:** Students will investigate and analyze the role of technology in improving the marketing process.

# Essential Competencies

All course goals should help students acquire three types of competencies:

- **Technical** – Major concepts or processes that students need to achieve course goals. They include what people do with their hands, the decisions they make and how they treat other people, data or things.
- **Academic** – Topics, concepts and procedures from all academic fields that students will have **to learn and apply** to successfully attain course goals. The academic fields include:
  - ❖ Communications Arts
  - ❖ Reading
  - ❖ Mathematics
  - ❖ Science
  - ❖ Social Studies
- **Transferable Work Skills** (SCANS) – Competencies required when students are given open-ended assignments asking them to create new designs, find new solutions, develop procedures for addressing a program or project on their own and explain their reasoning. Employers consider “thinking” skills essential for success in the workplace. The cognitive skills include:
  - ❖ Creative thinking
  - ❖ Decision-making
  - ❖ Problem-solving
  - ❖ Knowing how to learn
  - ❖ Reasoning

The qualities of a successful worker, including:

- ❖ Taking responsibility for their own learning
- ❖ Working with and learning from others
- ❖ Displaying self-management, including the ability to complete assignments on schedule
- ❖ Possessing integrity

#### 4. Major Course Projects (pages 45-49)

List in order the major projects that students will complete during course.

A project is defined as a curriculum unit or cumulative assessment to be completed by the students over time. Projects could include a research paper, demonstration with written component, video, Power Point and other technology-based presentations, etc. Projects tend to have both a product and written component. Projects typically include all skill and knowledge areas: technical, academic, and transferable skills. Projects should allow students to plan, collect, and evaluate information; analyze situations; and develop procedures for solving problems typically encountered in the workplace. They also provide a context for teaching technical and safety skills associated with a career major. Projects allow students to develop problem-solving skills. A good project generally requires a series of steps and the ability to make judgments and decisions when unexpected events occur.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

## 5. Course Assessment Plan (pages 67-87)

Assessments should evaluate all three standards: technical, academic, and transferable work skills. Assessments should also evaluate processes, procedures, and application of knowledge. Use a variety of assessment strategies and instruments, including paper and pencil tests, demonstrations, oral presentations, products, models, etc. The assessment description includes the method of evaluation, type of tests and assessment strategies, etc.

Assessment Strategy	Description	Weight/Percent
1.		
2.		
3.		
4.		

## Overview: Project, Performance Task, and Written Scenario

**On-Demand** curriculum and assessment means that the student responds to the task immediately, and is usually timed (e.g. 45 minute demonstration).

**Cumulative** curriculum and assessment means the activity usually spans a few or many days, and students have a chance to revise their work.

There are three strategies we will focus on:

- **Project:** Cumulative assessment or curriculum unit to be completed by the students over time. Projects could include a research paper, demonstration with written component, video, etc. Projects tend to have both a product and written component. Projects typically include all skill and knowledge areas and are more difficult to score with acceptable reliability and validity.
- **Performance Task:** On-demand assessment or curriculum unit where a teacher- or employer-developed task is given to the student to actually perform. Individually or in teams, students perform the task or tasks to be scored; sometimes scoring reviews both the process of completing the task and the outcome. Performance tasks typically place the first emphasis on *demonstrating* technical skills.
- **Scenario:** On-demand assessment or curriculum unit where a teacher- or employer-developed, problem-based scenario or case study within an industry is presented in writing to the students. Individually or in teams, students respond to the scenario in writing or in an oral presentation. Scenarios are intended to place a high emphasis on “transferable work skills” such as decision-making and problem-solving.

A simplified definition of the difference between assessment and curriculum is that assessment is **scored** and defensible. Curriculum might be graded, but it is usually based solely on teacher judgment. Assessment has a rubric or scoring criteria that is given to students and parents to clearly define expectations upfront.

# SAMPLE PROJECTS

## Example of Project Outline

### An Overview of Technology-Project Outline

**Project Title:** Solid Fuel Rockets

**Project Description:** Student teams will investigate rocket components and use available materials and tools to fabricate a solid fuel rocket. Teams will then demonstrate safe use of equipment when launching the rocket and use instruments to take measurements on which to base future calculations. Student teams will assemble a provided solid fuel rocket kit and use an approved launch device to propel the rocket. Students will take measurements of the rockets flight, which will be used for further calculations summarizing their findings in a one-page research document.

#### Course Goals Supported/Outcomes:

- Employ the applicable codes, laws, standards or regulations to safely use a variety of tools, equipment, machines, materials, and technical processes complete projects.
- Use problem solving and critical thinking to make decisions.
- Integrate academic skills with technological activities.
- Demonstrate teamwork, leadership, integrity, honesty, work habits, and organizational skills.

#### Performance Specifications:

When launched the rocket must operate satisfactorily throughout the duration of the flight and produce the desired effects:

- rocket must not breakup during launch, flight or recovery
- measure height, time of flight then use these values to calculate trajectory and distance flown
- logically present their findings in a one-page research document using correct grammar and sentence structure
- exhibit cooperation and leadership within the team

#### Rules and Guidelines:

- The rocket will be assembled according to the instructions included in the kit.
- Safety glasses will be worn at all times in the lab.
- Students must remain outside a 15 feet safety zone that surrounds the launch pad when the launch controls are active.
- Safe behavior must be employed in the launch area.

#### Instructional Delivery Plan:

*Introduction to project:* The class is introduced to the exciting world of rocketry through a short video of NASA launches, space walks, and moon walks. The teacher will briefly discuss rocket components and how rockets operate. Lab safety rules will also be reviewed.

*Class operation:* Student teams are selected. The school provides all supplies and materials to build and launch the rocket. Teams will construct the rocket kits according to manufacturer's directions. During the launch of the rocket, teams must designate launch personnel and recovery personnel from within the team. The team will use the data from the launch of their rocket to complete calculations for trajectory and flight distance. The individual students will then use the data and calculations from their team to write his/her own one-page research document to be presented orally to the class

*Monitoring, evaluating and grading performance:* Each team is required to assemble one rocket kit and successfully launch it taking measurements of the height obtained by the rocket and its time of flight. The team will then complete calculations. The individual student will write a one-page research document and present it to the class. Group discussions and study sheets will be used to periodically assess students understanding.

**Assessment Rubric:**

	1	2	3	4	5	
Construction	Rocket completely disassembled during flight		Several pieces become detached during flight/ met minimal requirements		Rocket remains intact throughout flight/ outstanding design and appearance	X5
Launch	No measurements taken or calculations made		Errors made in taking measurements and/or calculations		Accurate measurements and calculations	X5
Report	Does not clearly explain findings		Explains finding with some logic errors		Clearly explains findings	X5
Teamwork	Does not contribute to the group effort		Must be occasionally prompted to contribute to the group effort		Demonstrates leadership and makes beneficial contribution to the group effort	X5

## Example of Project Outline

### Medical Terminology

- Project Title:** Medical terms role-play
- Course Goals:** Master pronunciation, application, and spelling of medical terms using correct Grammar
- Situation:** Medical terms will be assigned to small groups to develop a role-play

### Performance Specifications

#### Technical

- Application of the medical term
- Teamwork

#### Academic

- Spelling
- Grammar
- Listening

#### Transferable Skills

- Creative thinking
- Reasoning
- Displaying self/time-management

### Project Rules and Guidelines

After completion of a unit of medical terminology students will be assigned a role-play. Students will be evenly divided into groups. Each group will be provided with a list of 25 medical terms and a medical dictionary. From this list of terms, each group will select ten or more terms to develop a role-play.

#### Key Project Points:

- A written script will be developed by the team that uses ten or more medical terms
- The teams will be given 20 minutes to write their scripts
- All students will assume a character and participate in the oral presentation
- Presentation length will be a maximum of five minutes
- The written script and the oral presentation shall contain correct grammar
- Each student will individually write a 30 or more word critique (reflection) of each role-play presentation
- The scripts and critiques must be handed in at the end of the class period

## Medical Terminology Role Play Assessment

### Script Assessment

5	4	3	2	1
Applies all medical terms correctly		Uses 80% correctly		Uses 60% correctly
Spells all terms correctly		Spells 80% correctly		Spells 60% correctly
Pronounced all medical terms correctly		Pronounced 60% correctly		Pronounced 60% correctly

### Oral Presentation Assessment

Team work is demonstrating by (a) all students participating, (b) all project components are completed, and (c) project is done on time		Component "a", "b" or "c" is not demonstrated.		Two or more components are missing
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### Critique Assessment

Reasoning is demonstrated by recognizing all correct use of terms		80% recognized		60% recognized
Listening skills are demonstrated by correctly identifying all items on the critique worksheet		80% identified		60% identified

## Project Planner Outline (pages 59-61)

<b>Project Title:</b>			
<b>Project Description or Purpose:</b>		<b>Project length:</b>	<b>Grade level(s):</b>
<b>Project Outcomes: What will students know and be able to do because they participated in this project?</b>			
<b>Course Title:</b>	<b>Academic Content Standards</b>	<b>Technical Competencies</b>	<b>Transferable Work Skills</b>
<b>Standards/Competencies to be address in this project: (Check crosswalk matrix for areas of correlation)</b>			
<b>Instructional activities that focus on expected student outcomes.</b>  <b>How can integrated projects be developed that incorporate academic, technical, and transferable work skills?</b>			
<b>How students will be assessed: (Check academic benchmarks)</b>			
<b>Assessment criteria for the project:</b>			
<b>Project Rules/Guidelines: Expectations for Students</b>			

Adapted from *Getting to Work: A Guide for Better Schools, Module 2: Integrated Curriculum*. Rahn et. al. NCRVE, 1998.

## **Example: A C-TAP Written Scenario**

**TITLE**                      The Sick Calf

### **Scenario**

**PROMPT**                      You are asked by your neighbors to look at their sick calf. You arrive and observe that the calf looks unhealthy. It has a dull coat, watery eyes, little appetite, and is scouring. Its pen is muddy and has no dry areas. There is no shelter in the pen.

                                      Your neighbors don't have much experience with cattle. They do not want to call in a veterinarian because of the cost. As far as you know, the calf has been given no medication or vaccinations.

### **Instructions**

**INSTRUCTIONS**                      Consider what you know about animal science. Prepare a list of recommendations for your neighbors to improve and maintain the health of the calf. Give reasons for what you suggest.

                                      To receive a Proficient rating on this task, you must show all the following:

- EVALUATION  
CRITERIA**
1. Knowledge of Animal Health
    - Animal parasites and pests
    - Animal nutrition
    - Animal facilities, equipment, and handling
  2. Ability to propose a solution to this scenario
  3. Ability to communicate effectively in writing

**Source:** *A Guide to Standards-based Assessment Systems: The C-TAP Example, WestEd, December 1996, San Francisco, CA (developed for California Department of Education and Sacramento County Office of Education)*

## **Worksheet: Written Scenario**

Career technical Area:

Grade Level:

Standards:

Activity/Prompt:

Directions to Students:

Evaluation Criteria:

# Determining Success: Rubrics

This section provides models for scoring alternative assessments. The two most common approaches to scoring come from experiences with scoring writing. Scoring is best completed with two or more readers. If reliability is a priority, training is conducted with trial papers or projects prior to actual scoring. In addition, tests for consistency across raters should be done.

**Holistic Scoring**: This type of scoring looks at the overall quality of the product. A scale is developed related to the level of competence (in the example below: highly flawed to competent). In large-scale writing assessments, a team of experienced teachers reads a pool of papers that represent a range in the quality of student work. Readers then begin to “benchmark” papers or rate them on a scale of one to four. Then using the benchmark papers, the group grades papers attempting to reach consensus on the standards and benchmarks.

Criteria for Holistic Scoring	
<b>4. Mastery</b> <ul style="list-style-type: none"> <li>• Ideas clearly communicated and of a fairly mature quality</li> <li>• No usage errors</li> <li>• Correct capitalization, punctuation, and spelling</li> <li>• No fragments or run-ons</li> <li>• Paragraphs have topic sentences, supporting ideas, closing sentences, and are developed in a mature fashion</li> <li>• Excellent vocabulary</li> <li>• Effective paragraph transitions</li> </ul>	<b>3. Acceptable</b> <ul style="list-style-type: none"> <li>• Ideas sufficiently organized and communicated</li> <li>• Only occasional usage errors (such as agreement, pronoun misuse, tense)</li> <li>• Basically correct capitalization</li> <li>• Minimal number of sentence errors (fragments or run-ons)</li> <li>• Paragraphs have topic sentences, supporting ideas, closing sentences</li> <li>• Some attempt at paragraph transition</li> </ul>
<b>2. Not Competent</b> <ul style="list-style-type: none"> <li>• Poor organization of ideas</li> <li>• Frequent usage of errors (such as agreement, pronoun misuse, tense)</li> <li>• Inconsistent use of capitalization, punctuation, and spelling conventions</li> <li>• Sentence fragments and run-ons; few complete sentences</li> <li>• Poor topic sentence; flawed paragraph development</li> </ul>	<b>1. Unacceptable</b> <ul style="list-style-type: none"> <li>• Ideas poorly communicated</li> <li>• Frequent usage of errors (such as agreement, pronoun, and spelling conventions)</li> <li>• Incorrect or erratic use of capitalization, punctuation, and spelling conventions</li> <li>• Sentence fragments and run-ons; few complete sentences</li> </ul> <p>No concept of paragraph construction</p>

**Analytic Scoring:** In analytic scoring, readers score work according to multiple criteria. Criteria are weighted in order of importance to the overall score. In the example below, organization, sentence structure, usage, mechanics and format are included in the criteria. The numbers in the right-hand column show the weighting scheme. In computing the scores, format is the least important trait. Mechanics counts four times as much as format, and organization counts six times as much. Analytic scoring is better than holistic scoring for diagnostic purposes. If you wish to know specifically what a student’s weakness is related to writing, analytic scores should provide this information.

<b>Criteria for Analytical Scoring</b>						
	1	2	3	4	5	
<b>Organiza- tion</b>	Little or nothing is written. The essay is disorganized, incoherent, and poorly developed. The essay does not stay on the topic.		The essay is not complete. It lacks an introduction, well-developed body, or conclusion. The coherence and sequence are attempt-ed, but not adequate.		The essay is well organized. It contains an introductory, supporting, and concluding paragraph. The essay is coherent, ordered logically, and fully developed.	<b>x6</b>
<b>Sentence Structure</b>	The student writes frequent run-ons or fragments.		The student makes occasional errors in sentence structure. Little variety in sentence length or structure exists.		The sentences are complete and varied in length and structure.	<b>x5</b>
<b>Usage</b>	The student makes frequent errors in work choice and agreement.		The student makes occasional errors in word choice or agreement.		The usage is correct. Word choice is appropriate.	<b>x4</b>
<b>Mechanics</b>	The student makes frequent errors in spelling, punctuation, and capitalization.		The student makes an occasional error in mechanics.		The spelling, capitalization, and punctuation are correct.	<b>x4</b>
<b>Format</b>	The format is sloppy. There are no margins or indentations. Handwriting is inconsistent.		The handwriting, margins, and indentations have occasional inconsis- tencies. There is either no title or an inappropriate title.		The format is correct, and the title is appropriate. the handwriting, margins, and indentations are consistent.	<b>x1</b>

There are multiple adaptations to analytic or holistic scoring. It is important to clearly define standards and determine acceptable performance levels. It is equally important to then communicate those expectations to students so that they know what to strive toward. Alternative assessment strategies, in essence, “give away the answers.” As educators, we are communicating to students what they are to know and be able to do in advance. Rubrics can be translated into grades, point systems or levels—it’s up to you. The important point with rubrics is to use them to communicate clear expectations to students and to use them consistently in judging student work.

**Adapted from Archbald, D., and Newmann, F. (1988). Beyond standardized testing. Reston, VA: National Association for Secondary School Principals (NASSP); and Site Development Guide #10 Southern Regional Education Board, *High Schools That Work*.**

## Sample Rubric Format

### Criteria: Holistic Scoring

4. Advanced Performance	3. Proficient Performance
2. Basic Performance	1. Novice Performance

### Criteria: Analytical Scoring

	1	2	3	4	5	

## Sample Rubrics

### **An Overview of Technology: Assessment Rubric**

	1	2	3	4	5	
Construction	Rocket completely disassembled during flight		Several pieces become detached during flight/ met minimal requirements		Rocket remains intact throughout flight/ outstanding design and appearance	X5
Launch	No measurements taken or calculations made		Errors made in taking measurements and/or calculations		Accurate measurements and calculations	X5
Report	Does not clearly explain findings		Explains finding with some logic errors		Clearly explains findings	X5
Teamwork	Does not contribute to the group effort		Must be occasionally prompted to contribute to the group effort		Demonstrates leadership and makes beneficial contribution to the group effort	X5

### **Medical Terminology Role Play Assessment**

#### **Script Assessment**

5	4	3	2	1
Applies all medical terms correctly		Uses 80% correctly		Uses 60% correctly
Spells all terms correctly		Spells 80% correctly		Spells 60% correctly
Pronounced all medical terms correctly		Pronounced 60% correctly		Pronounced 60% correctly

#### **Oral Presentation Assessment**

Team work is demonstrating by (a) all students participating, (b) all project components are completed, and (c) project is done on time		Component “a”, “b” or “c” is not demonstrated.		Two or more components are missing
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#### **Critique Assessment**

Reasoning is demonstrated by recognizing all correct use of terms		80% recognized		60% recognized
Listening skills are demonstrated by correctly identifying all items on the critique worksheet		80% identified		60% identified

# **APPENDIX**

# GLOSSARY OF TERMS

**Analytic Scoring:** In an analytically scored rubric, readers score work according to multiple criteria arranged in categories such as “writing strategies,” “grammar” etc. Criteria are weighted in order of importance to the overall score.

**Benchmark:** The benchmarks articulate what the goal and indicator represent at the different developmental levels: K-2, 3-5, 6-8, and 9-12. They provide targets for student performance and are an essential and critical component for local school districts to use in designing district and classroom assessments aligned with the goals, indicators, and grade level standards.

**Competency Profile:** A series of tasks or activities within a program or course that specify what a student should know and be able to do.

**Content Standard (Student Outcome):** Tells what it is we expect students to know and be able to do. They are not only a list of important knowledge and skills; they convey a vision for learning. Content standards spell out subject-specific knowledge and skills that schools are expected to teach and students are expected to learn.

**Core Course Standards:** The essential or critical set of standards that defines a course. This essential core should be found in this course regardless of where the course is taught. The core course standards will aid the articulation process and provide a consistent base of standards.

**Course:** The main topics within a program of study; a class or series of classes in a program of study. For example, in Technology Education (a program of study), there is a course called *Energy/Power*. In Human Development (a program of study in FACS), there is a course called *Parenting*.

**Course Description:** Three or four sentences that give a brief overview of a course. It includes five vital pieces of information: the aim of the course; place within the program of study; topics covered and expectations for student involvement; length of the course; and prerequisites. The course description specifies the content, expectations, time frame and context of the course within a larger curriculum structure.

**Course Goals:** Clearly worded, integrated statements (typically between 4-8) that provide a vivid image of what students are expected to know, understand, and be able to do after completing the course. Course goals emphasize big ideas and major career performance competencies that are important for the course, ranging from basic knowledge and application of knowledge to familiar and unfamiliar situations, developing and carrying out a plan, and making judgments.

**Course Standard:** It is the essential core of content that tells what it is we expect students to know and be able to do. They are not only a list of important knowledge and skills; they convey a vision for learning. **Similar to or may be identical to content standard (student outcomes).**

**Course Syllabus:** A summary of the critical, main elements of a course: course description, instructional philosophy and delivery plan, course goals, major course projects, and assessment plan.

**Crosswalk:** A process for identifying where career technical courses and programs use, enhance, and/or teach academic content standards. The purpose is to increase the rigor and relevance of academic content in career technical courses. Academic content teachers can identify ways to increase real-world application of academic knowledge and skills in their courses. Together, career technical and academic teachers can develop integrated products and align curriculum. The crosswalk also identifies where transferable work skills are taught.

**Curriculum:** A set of programs or courses offered by a school; or what and how content is taught in the classroom, content or subject area information with appropriate instructional methodology.

**Holistic Scoring:** A single, overall score is assigned to a performance. A holistically scored rubric looks at the overall quality of the product. A scale is developed related to the level of competence expected of students.

**Indicators:** The indicators further define the goals and set the framework for the content area. The indicators remain the same at all instructional levels (K-2, 3-5, 6-8, 9-12), thereby providing an ongoing and constant focus for the standards. The indicators also provide the targets and anchors for broad district-level, program evaluation.

**Performance Standard:** Indicates how well we expect students to perform. Performance standards define and illustrate levels of expected accomplishment with respect to content standards. Different performance levels may be applied to a single content standard (e.g. basic, proficient, advanced) or single minimum proficiency level (e.g. 80%).

**Performance Task:** On-demand assessment or curriculum unit where a teacher- or employer-developed task is given to the student to actually perform. Individually or in teams, students perform the task or tasks to be scored; sometimes scoring reviews both the process of completing the task and the outcome. Performance tasks typically place the first emphasis on *demonstrating* technical skills.

**Program:** Broad career technical subject areas; they are Family and Consumer Sciences; Agriculture Education; Technology Education; Business and Marketing; Trades and Industrial Education; Health.

**Programs of Study:** General subject areas within programs, for example, Family and Consumer Sciences has 7 programs of study: Career, Family, and Community Connections; Human Development; Family; Interpersonal Relationships; Parenting; Nutrition and Wellness; Consumer and Family Resources. Agriculture has 11 programs of study. Programs of study include recommended courses which standardize the articulation process.

**Program Standard:** A comprehensive standard that provides a broad description to assist individuals in understanding the content of the area. This standard is not designed for measurement, but to provide a general description and overall direction of the program.

**Project:** Curriculum unit or cumulative assessment to be completed by the students over time. Projects could include a research paper, demonstration with written component, video, etc. Projects tend to have both a product and written component. Projects typically include all skill and knowledge areas and are more difficult to score with acceptable reliability and validity than more traditional forms of assessment. Projects should allow students to plan, collect, and evaluate

information; analyze situations; and develop procedures for solving problems typically encountered in the workplace. They also provide a context for teaching technical and safety skills associated with a career major. Projects allow students to develop problem-solving skills. A good project generally requires a series of steps and the ability to make judgments and decisions when unexpected events occur.

**Rubric:** An established and written-down set of criteria for scoring or rating students' performance on tests, portfolios, writing samples, or other performance tasks. A scoring tool designed to assist in the process of clarifying and communicating expectations for students. Rubrics are grading grids containing specific information about what is expected of students for every performance standard.

**Scenario:** On-demand assessment or curriculum unit where a teacher- or employer- developed, problem-based scenario or case study within an industry is presented in writing to the students. Individually or in teams, students respond to the scenario in writing or in an oral presentation. Scenarios are intended to place a high emphasis on "transferable work skills" such as decision-making and problem-solving.

**Technical Competency:** Further defines the knowledge, skills, and practices of content standards and provide the basis for measurement criteria. They are composed of action verbs and the contents acted upon. An individual component of a competency profile.

Transferable Work Skills (SCANS): The *Secretary's Commission on Achieving Necessary Skills (SCANS)* examines the demands of the workplace to determine what skills are needed for employment. These skills go across all fields of employment and are expected of employees in a wide range of careers. They include skills such as decision-making, problem-solving, time management, creative thinking, ability to work with others, integrity, responsibility, and resource management.

**Source:** *Designing Challenging Vocational Courses*. Gene Bottoms, David J. Pucel, and Ione Phillips. Southern Region Education Board.

## RUBRIC FOR COURSE SYLLABUS EVALUATION

	0	1	2	3	4	
COURSE DESCRIPTION	Does not contain descriptions of all 5 components of the course description: aim, topics, place within program of study, length, and prerequisites. A consumer reading the description will be unsure of what takes place in the course.		Contains a description of all 5 components of the course description: aim, topics covered, place within the program of study, length of course, and prerequisites. A consumer reading the description will have a general idea about what takes place in the course.		Contains a <b>clear, specific description</b> of all 5 components of the course description: aim, topics covered, place within the program of study, length of course, and prerequisites. A consumer reading the description will have a clear, definite idea about what takes place in the course. The course description provides direction.	X3  (12 max.)
INSTRUCTIONAL PHILOSOPHY AND DELIVERY PLAN	Does not contain the 5 components of the instructional philosophy and delivery plan: expectations for student performance; instructional delivery; how students will work; community involvement; student evaluation. If the five components are present, they are described so vaguely that a consumer will be unsure about expectations in the course.		Contains the 5 components of the instructional philosophy and delivery plan: expectations for student performance; instructional delivery; how students will work; community involvement; student evaluation, but not to the specificity of a 5 rating. A consumer will have a good idea of expectations in the course.		Contains in detail the 5 components of the instructional philosophy and delivery plan: expectations for student performance; instructional delivery; how students will work; community involvement; student evaluation. A consumer will have a clear understanding about expectations in the course.	X4  (16 max.)
INTEGRATED COURSE GOALS	Course goals do not integrate technical and academic standards and transferable work skills. There is little or no evidence of Core Course Standards. Goals focus on lower level thinking skills at the knowledge and/or comprehension level and do not include higher level critical thinking skills. Consumers will not have a clear understanding of what students will know and be able to do by the end of the course.		There is some evidence of integration of academic, technical, and work skills standards and Core Course Standards. Course goals include both lower and higher level thinking skills. Consumers will have a general understanding of what students will know and be able to do by the end of the course.		Technical and academic standards and transferable work skills are integrated in course goals. Core Course Standards are imbedded in the goals. Goals go beyond knowledge and comprehension skills and include higher order thinking skills such as analysis, application, and evaluation. Consumers will have a clear understanding of what students will know and be able to do by the end of the course.	X6  (24 max.)

	0	1	2	3	4	
MAJOR COURSE PROJECTS	Course projects are loosely related or unrelated to course goals and provide students with little opportunity to acquire technical, academic, and work place skills. Projects do not offer students opportunities to enhance critical thinking and problem solving skills.		Course projects are somewhat related to course goals and allow students to acquire technical, academic, and work place skills in a contextual setting and some real work experience. Projects offer students the opportunity to develop some critical thinking and problem solving skills.		Course projects are clearly related to course goals and allow students to acquire technical, academic, and work place skills in a contextual setting and provide real work experiences. Projects offer students the opportunity to develop critical thinking and problem solving skills.	X6 (24 max.)
COURSE ASSESSMENT PLAN	The course assessment plan relies too much on one-type of assessment. Assessment plan does not take into account individual student needs. Little opportunity for students to demonstrate knowledge and skills. There is no clear evidence that technical, academic, and transferable work skills standards are being assessed.		The course assessment plan attempts to evaluate all three standards: technical, academic, and transferable work skills. The plan offers some opportunities for students to demonstrate knowledge and skills through a variety of assessment strategies. Assessments rely more on lower level thinking skills as recalling facts and information and understanding information.		The course assessment plan provides clear evidence that it evaluates all three standards: technical, academic, and transferable work skills. The plan uses multiple assessment strategies to assess students' knowledge and skills and provide information that enables the teacher to vary instruction based on student needs. The plan offers opportunities for students to demonstrate their ability to research, plan, solve problems and become independent learners. Assessments evaluate knowledge and skills application and ask students to use higher order thinking skills.	X6 (24 max.)

Rating Scale:

Course Description	0-12 points, 6 points minimum for acceptability
Instruction Philosophy/Delivery Plan	0-16 points, 8 points minimum for acceptability
Course Goals	0-24 points, 12 points minimum for acceptability
Major Course Projects	0-24 points, 12 points minimum for acceptability
Course Assessment Plan	0-24 points, 12 points minimum for acceptability
Total scores for syllabus	100 points maximum 50 points minimum Anything lower, entire syllabus needs revision.

Any section of the syllabus scoring below the minimum points will need to be revised.